

## **REMARKS**

With this Response claims are amended. Therefore, claims 1-30 are pending.

### **CLAIM REJECTIONS - 35 U.S.C. § 102**

Claims 1, 4-5, and 10 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,047,186 issued to Yu et al. (*Yu*). Applicants respectfully submit that these claims are not anticipated by the cited reference for at least the following reasons.

Claim 1 as amended recites the following:

measuring one or more performance characteristics associated with each of at least a subset of a **plurality of targets** in a wireless communication system, each target a **communication target** with which to engage in two-way communication; and  
selectively building one or more clusters, each cluster **including one or more target(s) and which share common wireless communication channel(s)**, based at least in part on the performance characteristics.

The Office Action at page 2 asserts that the sectors of *Yu* disclose the plurality of targets of the claimed invention. Applicants traverse this assertion. *Yu* discusses defining a geographic area and decomposing the geographic area into multiple geographic sectors. See col. 4, line 63 to col. 5, line 44. The reference's discussion of **geographic** sectors fails to disclose divided sectors that are communication "targets" which share a common wireless communication channel, as recited in the claim. Thus, *Yu* fails to disclose or suggest at least this element of the claim. Because *Yu* fails to disclose at least one element of the claimed invention, the reference fails to anticipate the claim under MPEP § 2131.

Claims 4-5 and 10 depend from claim 1 and thus necessarily include the limitations of claim 1. Because the reference fails to disclose at least one element of the independent base claim, the reference necessarily fails to disclose at least one element of these dependent claims.

Thus, the reference fails to anticipate these claims for at least the reasons set forth above with respect to claim 1.

### **CLAIM REJECTIONS - 35 U.S.C. § 103**

#### **Claim 2**

Claim 2 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Yu* in view of U.S. Patent No. 6,330,429 issued to *He (He)*. The Office Action cites *He* as disclosing SINR, RSSI, BER, and FER. Whether or not *He* discloses what is asserted, the reference fails to cure the deficiencies of *Yu*, at least because *He* likewise fails to disclose or suggest communication targets which share a common wireless communication channel, as recited in independent claim 1, from which claim 2 depends. Thus, whether alone or in combination the cited references fail to disclose or suggest at least one element of the invention as recited in independent claim 1, and claim 1 is nonobvious over the cited references. A claim that depends from a nonobvious independent claim is also nonobvious, as per MPEP § 2143.03. Thus, this claim is not rendered obvious by the cited references for at least the reason claim 1 is not anticipated by *Yu*.

#### **Claim 3**

Claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Yu* in view of U.S. Patent No. 5,903,843 issued to Suzuki et al. (*Suzuki*). As Applicants have understood the reference, *Suzuki* discusses dynamic channel assignment selection based on the carrier to interference power ratio (CIR). See Abstract. *Suzuki* discusses assigning different channels to each different mobile unit. Thus, *Suzuki* fails to disclose or suggest a plurality of communication targets which share a common wireless communication channel, as recited in independent claim 1, from which claim 3 depends, and in fact teaches away from the claims. This reference thus suffers at least the same deficiency as *Yu*. A combination of these references, even if proper,

fails to disclose or suggest at least one limitation of the claimed invention. Therefore, the references alone, or combined, fail to render obvious the invention as recited in the independent claim, and claim 1 is nonobvious over the cited references. A claim that depends from a nonobvious independent claim is also nonobvious, as per MPEP § 2143.03. Thus, this claim is not rendered obvious by the cited references for at least the reason claim 1 is not anticipated by *Yu*.

#### **Claim 6**

Claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Yu* in view of U.S. Patent No. 6,018,643 issued to Golemon et al. (*Golemon*). As Applicants have understood the reference, *Golemon* discusses beamforming to track a received signal. The reference fails to disclose or suggest a plurality of communication targets which share a common wireless communication channel, as recited in independent claim 1, from which claim 6 depends, and so fails to disclose or suggest at least one element of claim 1 that is also not shown in *Yu*. Thus, the references, whether alone or in combination, fail to disclose or suggest at least one limitation of the claimed invention, and so fail to render obvious the invention as recited in the independent claim. Claim 1 is therefore nonobvious over the cited references, and claim 6 is similarly nonobvious under MPEP § 2143.03. Thus, this claim is not rendered obvious by the cited references for at least the reason claim 1 is not anticipated by *Yu*.

#### **Claims 7-9**

Claims 7-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Yu* in view of U.S. Patent No. 5,875,180 issued to Wiedeman et al. (*Wiedeman*). Applicants have understood *Wiedeman* as discussing dividing up a band of frequencies into multiple sub-bands of frequencies, with one sub-band of frequencies assigned to an interferer. Applicants submit that

dividing frequencies into multiple sub-bands and assigning different sub-bands to different intended receivers, as in *Wiedeman*, fails to disclose or suggest a plurality of communication targets which share a common wireless communication channel, as recited in independent claim 1, from which claim 7-9 depend. These claims are thus nonobvious over the cited references under MPEP § 2143.

**Claims 11-12, 20-27, and 30**

Claims 11-12, 20-27, and 30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Yu* in view of U.S. Patent No. 6,018,643 issued to Golemon et al. (*Golemon*). Applicants respectfully submit that this claim is not rendered obvious by the cited references for at least the following reasons.

Claim 11 recites the following:

wireless communication resources; and  
a communication agent, coupled with the wireless communication resources, to populate cluster(s) with one or more communication target(s) based, at least in part, on one or more estimated performance characteristics associated with the **targets that share a common wireless communication channel** in the cluster(s), and to develop a weighting value for at least a subset of the populated clusters to generate a transmission beam to target(s) within the cluster(s) based, at least in part, on the developed weighting value.

Claim 21 includes similar elements directed to one or more target(s) that share a common wireless communication channel.

As discussed above, *Yu* discusses defining a geographic area and decomposing the geographic area into multiple geographic sectors, and fails to disclose or suggest targets that share a common wireless communication channel. *Golemon* discusses beamforming to track a received signal, and similarly fails to disclose or suggest targets that share a common wireless communication channel. Thus, *Golemon* suffers at least the same deficiency as *Yu*, and so cannot cure the deficiencies of *Yu*. Whether alone or in combination the cited references fail to

disclose or suggest at least one element of the claimed invention, and so fail to render obvious the invention as recited in the independent claims under MPEP § 2143. References that fail to render obvious independent claims necessarily also fail to render obvious the invention as recited in claims depending from the independent claims under MPEP § 2143.03. Thus, the remaining claims are likewise not rendered obvious by the cited references for at least the same reasons as the independent claims.

### **Claims 13-19 and 28-29**

Claims 13-16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Yu* in view of *Golemon* and *He*. Claims 17-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Yu* in view of *Golemon*, *He*, and *Weideman*. Claims 28-29 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Yu* in view of *Golemon* and *Weideman*. The merit of each of these references is addressed above. Each of the references is commonly deficient with respect to at least the same one element of the independent base claims. Because the references separately all fail to disclose at least the same element of the independent claims, the references in combination likewise fail to disclose or suggest at least that element. Thus, the cited references fail to render obvious the independent base claims, and therefore likewise fail to render obvious the claims depending from that independent base claims. See MPEP § 2143.03. Therefore, these claims, which depend from independent base claims addressed above, are not rendered obvious by the cited references.

### **CONCLUSION**

For at least the foregoing reasons, Applicant submits that all rejections have been overcome placing all pending claims in condition for allowance. Such action is earnestly

solicited. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the above-referenced application.

Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,  
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11/12/04

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